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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,969	09/20/2001	Yoshitsugu Hama	2001_1299A	1913

513 7590 01/06/2004

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

MENON, KRISHNAN S

ART UNIT PAPER NUMBER

1723

DATE MAILED: 01/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,969

Applicant(s)

HAMA ET AL.

Examiner

Krishnan S Menon

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-8, 12-14 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 12-14 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claims 1-3,6-8, 12-14 and 17-19 are pending. Claims 9-11 are withdrawn from consideration and claims 4,5,15 and 16 are cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3,6- 8, 12-14 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinjou et al (US 4,795,559).

Shinjou (559) teaches a semipermeable membrane support comprising a non-woven fabric with a main fiber and a binder fiber formed of synthetic resin, manufactured by paper making process and then heating and pressing, having tensile strength ratio between the machine and transverse direction as equal (abstract, col 5 lines 55-63), and air permeability of 0.5-7 cc/cm²/sec (abstract) as in claim 1, and also calendered as in claim 12.

Re the limitations of porosity of 5 to 15 microns in claims 1 and 12: Shinjou (559) teaches a semipermeable membrane support with two different fibers and manufactured by the paper making process and heat-pressed. Shinjou (559) teaches all parameters of the non-woven such as material, fiber decitex, tensile strengths, and air permeability

(abstract, col 5 lines 55-63, tables) as taught by the instant application, except the porosity of the membrane as being between 5 and 15 microns. It would be obvious to one of ordinary skill in the art at the time of invention that since the non-woven as taught by Shinjou (559) has materials and properties similar to what is disclosed by the instant application, and is made by similar methods, the pore size also would be similar.

The fiber fineness is between 0.6 and 8.9 decitex (abstract, col 3 lines 37-43, examples); (1 denier = 1 gm for 9000m fiber as opposed to 1 decitex = 1g for 10,000 m.) as in instant claims 2, 13, 3 and 14;. The support would be capable of preventing bending in the width direction during manufacture of the semipermeable membrane, since it meets the tensile strength requirements (col 5 lines 55-63) as in instant claim 6 and 17. Tensile ratio is 1:1 as in claim 7 and 18(col 5 lines 55-63). Shinjou (559) teaches a semipermeable membrane support made by heating and pressing after paper making (abstract, col 3 lines 37-43) with tensile strength ratio 1:1 (col 5 lines 55-63) having the membrane-coated front surface rougher than the rear surface as in instant claim 8 and 19.

Response to Amendment

The declaration under 37 CFR 1.132 filed 9/16/03 is insufficient to overcome the rejection of instant claims based upon the Shinjou ref as set forth in the last Office action because: the reference anticipates the parameters in the claims which are assessed in the tests conducted in the declaration. Tensile strength ratio of the comparative example 2 is not what taught by the reference.

Response to Arguments

Applicant's arguments filed 9/16/03 have been fully considered but they are not persuasive.

In response to the applicant's arguments about the importance of controlling air permeability, employing thinner fibers and at the same time reducing the curling problem arising from the use of thinner fibers, applicant's attention is directed to the Shinjou ref, col 3 line 5 to col 5 line 68, particularly col 3 lines 37-43, col 4 lines 4-15, col 5 lines 3-17 and 55-63, where every factor in the applicant's argument, except the pore size, is discussed. The need for controlling the degree of penetration of the semipermeable membrane is also discussed. The reference uses the same materials, same denier (or decitex), same air permeability, same tensile strength ratio and the same process of making the web. Therefore, in regard to the argument that there is no suggestion in the Shinjou ref concerning pore size of the non-woven fabric, the material should have inherently the same porosity as claimed, even if the ref makes no suggestion of the porosity. Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102." In re Best, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). This same rationale should also apply to product, apparatus, and process claims claimed in terms of function, property or characteristic.

Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims. [T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

Argument re the Shinjou ref, that the porosity need not be the same if the material, fiber decitex, tensile strength and air permeability are the same: while the air permeability depends on the number and the size of the pores, the material and the decitex (a measure of the fiber diameter) of the web being the same, the air permeability will depend on the porosity. Since the air permeability is the same, the porosity has to be the same.

Argument re the submitted affidavit: the experiment described in the affidavit is inconclusive because the curling can happen due to the amount of material that is coated on the web by casting, and that is not accounted for in the experiment. The comparative material has almost 50% higher air permeability, which means it could soak up more casting solution. The example 1 material is 10% thicker than the comparative material, which means that it may naturally have less curling tendency. In

any case, since the reference Shinjou teaches a tensile ratio of 1:1 as claimed, the experiment is moot.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 703-305-5999. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 703-308-0457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-661.

Application/Control Number: 09/955,969
Art Unit: 1723

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Krishnan Menon
Patent Examiner


W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700